

SEQUENCE LISTING

 $<\!120\!>\,$ Novel Methods of Diagnosing Breast Cancer, Compositions, and Methods of Screening for Breast Cancer Modulators

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Cys Ala Gln Gly Leu Asp Asp Cys His Ala Asp Ala Leu Cys Gln Asn 50 55 60

Thr Pro Thr Ser Tyr Lys Cys Ser Cys Lys Pro Gly Tyr Gln Gly Glu 65 70 75 80

Gly Arg Gln Cys Glu Asp Ile Asp Glu Cys Gly Asn Glu Leu Asn Gly 85 90 95

Gly Cys Val His Asp Cys Leu Asn Ile Pro Gly Asn Tyr Arg Cys Thr

Cys Phe Asp Gly Phe Met Leu Ala His Asp Gly His Asn Cys Leu Asp 115 120 125

Val Asp Glu Cys Leu Glu Asn Asn Gly Gly Cys Gln His Thr Cys Val 130 135 140

Asn Val Met Gly Ser Tyr Glu Cys Cys Cys Lys Glu Gly Phe Phe Leu 145 150 155 160

Ser Asp Asn Gln His Thr Cys Ile His Arg Ser Glu Glu Gly Leu Ser 165 170 175

Cys Met Asn Lys Asp His Gly Cys Ser His Ile Cys Lys Glu Ala Pro 180 185 190

Arg Gly Ser Val Ala Cys Glu Cys Arg Pro Gly Phe Glu Leu Ala Lys 195 200 205

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Gln His Ser Cys Asp Asp Thr Ala Asp Gly Pro Glu Cys Ser Cys His 225 230 235 240

Pro Gln Tyr Lys Met His Thr Asp Gly Arg Ser Cys Leu Glu Arg Glu 245 250 255

Asp Thr Val Leu Glu Val Thr Glu Ser Asn Thr Thr Ser Val Val Asp 260 265 270

Gly Asp Lys Arg Val Lys Arg Arg Leu Leu Met Glu Thr Cys Ala Val 275 280 285

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His Cys Ser Cys Pro Val Gly Phe Thr Leu Gln Leu Asp Gly Lys Thr 305 310 315 320

Cys Lys Asp Ile Asp Glu Cys Gln Thr Arg Asn Gly Gly Cys Asp His 325 330 335

Phe Cys Lys Asn Ile Val Gly Ser Phe Asp Cys Gly Cys Lys Lys Gly 340 345 350

Phe Lys Leu Leu Thr Asp Glu Lys Ser Cys Gln Asp Val Asp Glu Cys 355 360 365

Ser Leu Asp Arg Thr Cys Asp His Ser Cys Ile Asn His Pro Gly Thr 370 375 380

Phe Ala Cys Ala Cys Asn Arg Gly Tyr Thr Leu Tyr Gly Phe Thr His 385 390 395 400

Cys Gly Asp Thr Asn Glu Cys Ser Ile Asn Asn Gly Gly Cys Gln Gln 405 410 415

Val Cys Val Asn Thr Val Gly Ser Tyr Glu Cys Gln Cys His Pro Gly
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Tyr Lys Leu His Trp Asn Lys Lys Asp Cys Val Glu Val Lys Gly Leu 435 440 445

Leu Pro Thr Ser Val Ser Pro Arg Val Ser Leu His Cys Gly Lys Ser

450 455 460

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- Arg Pro Ala Leu Pro Glu Lys His Ser Ser Val Lys Glu Ser Phe Arg 515 520 525
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- Gly Arg Pro Ser Thr Pro Lys Glu Met Phe Ile Thr Val Glu Phe Glu 545 550 555 555
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- Arg Lys Ala Val His Arg Glu Gln Phe His Leu Gln Leu Ser Gly Met $595 \hspace{1.5cm} 600 \hspace{1.5cm} 605 \hspace{1.5cm}$
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- Glu Ser Cys Gly Val Gly Gln Gly His Ala Glu Asn Gln Cys Val Ser 625 630 635 640
- Cys Arg Ala Gly Thr Tyr Tyr Asp Gly Ala Arg Glu Arg Cys Ile Leu 645 650 655
- Cys Pro Asn Gly Thr Phe Gln Asn Glu Glu Gly Gln Met Thr Cys Glu $\,$ 660 $\,$ 665 $\,$ 670
- Pro Cys Pro Arg Pro Gly Asn Ser Gly Ala Leu Lys Thr Pro Glu Ala 675 680 685
- Trp Asn Met Ser Glu Cys Gly Gly Leu Cys Gln Pro Gly Glu Tyr Ser 690 695 700

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Pro Glu Ala Gly Arg Thr Ser Cys Phe Pro Cys Gly Gly Leu Ala 725 730 735

Thr Lys His Gln Gly Ala Thr Ser Phe Gln Asp Cys Glu Thr Arg Val 740 745 750

Gln Cys Ser Pro Gly His Phe Tyr Asn Thr Thr Thr His Arg Cys Ile 755 760 765

Arg Cys Pro Val Gly Thr Tyr Gln Pro Glu Phe Gly Lys Asn Asn Cys 770 780

Val Ser Cys Pro Gly Asn Thr Thr Thr Asp Phe Asp Gly Ser Thr Asn 785 790 795 800

Ile Thr Gln Cys Lys Asn Arg Arg Cys Gly Gly Glu Leu Gly Asp Phe 805 810 815

Thr Gly Tyr Ile Glu Ser Pro Asn Tyr Pro Gly Asn Tyr Pro Ala Asn 820 825 830

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Ile Val Val Pro Glu Ile Phe Leu Pro Ile Glu Asp Asp Cys Gly Asp 850 855 860

Tyr Leu Val Met Arg Lys Thr Ser Ser Ser Asn Ser Val Thr Thr Tyr 865 870 875 880

Glu Thr Cys Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ser Arg Ser 885 890 895

Lys Lys Leu Trp Ile Gln Phe Lys Ser Asn Glu Gly Asn Ser Ala Arg 900 905 910

Gly Phe Gln Val Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Gln Glu Leu 915 920 925

Ile Glu Asp Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His 930 935 940

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Leu Ala His Pro Gln Asn Tyr Phe Lys Tyr Thr Ala Gln Glu Ser Arg
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Gln Gly Leu Asp Asp Cys His Ala Asp Ala Leu Cys Gln Asn Thr Pro 50 55 60

Thr Ser Tyr Lys Cys Ser Cys Lys Pro Gly Tyr Gln Gly Glu Gly Arg 65 70 75 80

Gln Cys Glu Asp Met Asp Glu Cys Asp Asn Thr Leu Asn Gly Gly Cys 85 90 95

Val His Asp Cys Leu Asn Ile Pro Gly Asn Tyr Arg Cys Thr Cys Phe 100 105 110

Asp Gly Phe Met Leu Ala His Asp Gly His Asn Cys Leu Asp Met Asp 115 120 125

Glu Cys Leu Glu Asn Asn Gly Gly Cys Gln His Ile Cys Thr Asn Val 130 135 140

Ile Gly Ser Tyr Glu Cys Arg Cys Lys Glu Gly Phe Phe Leu Ser Asp 145 150 155 160

Asn Gln His Thr Cys Ile His Arg Ser Glu Glu Gly Leu Ser Cys Met 165 170 175

Asn Lys Asp His Gly Cys Gly His Ile Cys Lys Glu Ala Pro Arg Gly 180 185 190

Ser Val Ala Cys Glu Cys Arg Pro Gly Phe Glu Leu Ala Lys Asn Gln

195 200 205

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- Ala Ala His Arg Glu Gln Phe His Leu Gln Leu Ser Gly Met Asp Leu 595 600 605
- Asp Met Ala Lys Thr Pro Ser Arg Val Ser Gly Gln His Glu Glu Thr 610 620
- Cys Gly Val Gly Gln Gly His Glu Glu Ser Gln Cys Val Ser Cys Arg 625 630 635 640
- Ala Gly Thr Tyr Tyr Asp Gly Ser Gln Glu Arg Cys Ile Leu Cys Pro
 645 650 655
- Asn Gly Thr Phe Gln Asn Glu Glu Gly Gln Val Thr Cys Glu Pro Cys 660 665 670
- Pro Arg Pro Glu Asn Leu Gly Ser Leu Lys Ile Ser Glu Ala Trp Asn 675 680 685
- Val Ser Asp Cys Gly Gly Leu Cys Gln Pro Gly Glu Tyr Ser Ala Asn 690 695
- Gly Phe Ala Pro Cys Gln Leu Cys Ala Leu Gly Thr Phe Gln Pro Asp 705 710 715 720
- Val Gly Arg Thr Ser Cys Leu Ser Cys Gly Gly Gly Leu Pro Thr Lys
 725 730 735
- His Leu Gly Ala Thr Ser Phe Gln Asp Cys Glu Thr Arg Val Gln Cys $740 \hspace{1.5cm} 745 \hspace{1.5cm} 750 \hspace{1.5cm}$
- Ser Pro Gly His Phe Tyr Asn Thr Thr Thr His Arg Cys Ile Arg Cys 755 760 765
- Pro Leu Gly Thr Tyr Gln Pro Glu Phe Gly Lys Asn Asn Cys Val Ser 770 780
- Cys Pro Gly Asn Thr Thr Thr Asp Phe Asp Gly Ser Thr Asn Ile Thr 785 790 795 800
- Gln Cys Lys Asn Arg Lys Cys Gly Gly Glu Leu Gly Asp Phe Thr Gly 805 810 815
- Tyr Ile Glu Ser Pro Asn Tyr Pro Gly Asn Tyr Pro Ala Asn Ser Glu 820 825 830
- Cys Thr Trp Thr Ile Asn Pro Pro Pro Lys Arg Arg Ile Leu Ile Val 835 840 845

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Val Pro Glu Ile Phe Leu Pro Ile Glu Asp Asp Cys Gly Asp Tyr Leu
                        855
Val Met Arg Lys Thr Ser Ser Ser Asn Ser Val Thr Thr Tyr Glu Thr
865
                                        875
Cys Gln Thr Tyr Glu Arg Pro Ile Ala Phe Thr Ser Arg Ser Lys Lys
Leu Trp Ile Gln Phe Lys Ser Asn Glu Gly Asn Ser Ala Arg Gly Phe
                                905
Gln Val Pro Tyr Val Thr Tyr Asp Glu Asp Tyr Gln Glu Leu Ile Glu
                            920
Asp Ile Val Arg Asp Gly Arg Leu Tyr Ala Ser Glu Asn His Gln Glu
                        935
Ile Leu Lys Asp Lys Lys Leu Ile Lys Ala Leu Phe Asp Val Leu Ala
                    950
His Pro Gln Asn Tyr Phe Lys Tyr Thr Ala Gln Glu Ser Arg Glu Met
                965
Phe Pro Arg Ser Phe Ile Arg Leu Leu Arg Ser Lys Val Ser Arg Phe
            980
Leu Arg Pro Tyr Lys
       995
<210> 4
<211> 5
<212> PRT
<213> Unknown
<220>
<223> Cytokine receptor exctacelluar motif found in many species.
<220>
<221> UNSURE
<222> (3)..(3)
<223> "Xaa" at position 3 can be any amino acid.
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<400> 4

Trp Ser Xaa Trp Ser